

Figure 4 is perfect, the voltage that has been read during the period C must correctly correspond to the signal charge amount. In actual, however, during the period D after the resetting, the output voltage of the CSA 20 is not perfectly equal to the reference voltage GND, thereby causing the generation of an offset voltage. Such an offset voltage is generated due to (a) an offset or a flicker noise of the operational amplifier 20a and/or (b) a feed through phenomenon occurred when the TFT (switching devices 18) and/or the reset switch 20c turn on and off. The feed through phenomenon is essential to MOS switches. According to